

AMENDMENT

In the Claims:

The following listing reflects amendments to the claims and replaces all prior versions and listings of claims in this application.

1. (Currently amended) An isolated nucleic acid molecule comprising a coding sequence for an immunogenic *C. parvum* polypeptide, wherein the polypeptide is selected from the group consisting of (a) a polypeptide comprising the sequence of amino acids depicted at amino acid positions 1-193 of Figure 2B 2A (SEQ ID NO:4), or an immunogenic fragment thereof comprising at least 15 nucleotides amino acids and that elicits an equivalent or enhanced immunological response as compared to the polypeptide comprising the sequence of amino acids depicted at amino acid positions 1-193 of Figure 2B 2A, wherein the immunological response comprises the ability to elicit the production of neutralizing antibodies against *C. parvum*, and (b) a polypeptide with at least 90% sequence identity to a polypeptide comprising the sequence of amino acids depicted at amino acid positions 1-193 of Figure 2B 2A (SEQ ID NO:4) and that elicits an equivalent or enhanced immunological response as compared thereto, wherein the immunological response comprises the ability to elicit the production of neutralizing antibodies against *C. parvum*.
2. (Cancelled)
3. (Previously presented) The nucleic acid molecule of claim 1 wherein said molecule comprises a nucleotide sequence having at least 90% sequence identity to the nucleotide sequence shown at nucleotide positions 9-587, inclusive, of Figure 2A (SEQ ID NO:3).
4. (Original) A recombinant vector comprising:
 - (a) a nucleic acid molecule according to claim 1; and

(b) control elements that are operably linked to said nucleic acid molecule whereby said coding sequence can be transcribed and translated in a host cell, and at least one of said control elements is heterologous to said coding sequence.

5. (Cancelled)

6. (Original) A recombinant vector comprising:

(a) a nucleic acid molecule according to claim 3; and

(b) control elements that are operably linked to said nucleic acid molecule whereby said coding sequence can be transcribed and translated in a host cell, and at least one of said control elements is heterologous to said coding sequence.

7. (Original) A host cell transformed with the recombinant vector of claim 4.

8. (Original) A method of producing a recombinant *C. parvum* antigenic polypeptide comprising:

(a) providing a population of host cells according to claim 7; and

(b) culturing said population of cells under conditions whereby the antigenic polypeptide encoded by the coding sequence present in said recombinant vector is expressed.

9-31. (Cancelled)

32. (Currently amended) The nucleic acid molecule of claim 1, wherein the coding sequence encodes an immunogenic polypeptide comprising the sequence of amino acids depicted at amino acid positions 1-193 of Figure 2B 2A (SEQ ID NO:4).

33. (Previously presented) A recombinant vector comprising:

(a) a nucleic acid molecule according to claim 32; and

(b) control elements that are operably linked to said nucleic acid molecule whereby said coding sequence can be transcribed and translated in a host cell, and at least one of said control elements is heterologous to said coding sequence.

34. (Previously presented) A host cell transformed with the recombinant vector of claim 33.

35. (Previously presented) A method of producing a recombinant *C. parvum* antigenic polypeptide comprising:

- (a) providing a population of host cells according to claim 34; and
- (b) culturing said population of cells under conditions whereby the antigenic polypeptide encoded by the coding sequence present in said recombinant vector is expressed.